UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/185,550	11/04/1998	MINORU SEKIGUCHI	8261516JDH	5524

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EXAMINER
HAN, QI

ART UNIT	PAPER NUMBER
2626	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
	09/185,550	SEKIGUCHI, MINORU
Office Action Summary	Examiner	Art Unit	
	Qi Han	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>19 December 2006 and 14 November 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-3,13 and 15</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-3,13 and 15</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114.

Response to Amendment

3.   This communication is responsive to the applicant's amendment filed on 11/14/2006 and

RCE filed on 12/19/2006. The applicant(s) amended claims 1, 13 and 15, and cancelled claim 16

(see the amendment: pages 2-4).

Response to Arguments

4.   Applicant's arguments filed on 11/14/2006 with respect to the rejection of claims 1-3, 13

and 15 under 35 USC 102/103 (the amendment-remarks: page 5), have been fully considered but

are moot in view of the new ground(s) of rejection, since the amended claims introduce new

issue and/or change the scope of the claims (see detail in the claim rejection below).

Claim Rejections - 35 USC § 103

5.   Claims 1-3, 13 and *15* are rejected under *35 U.S.C. 103* (a) as being unpatentable over

DAVIS et al. (US 5,177,685) hereinafter referenced as DAVIS in view of WACHTEL (US

5,870,701) and HON et al. (US 5,852,801) hereinafter referenced as HON.

As per **claim 1,** DAVIS teaches automobile navigation system using real time spoken

driving instructions (title), including using (processing) data from a position sensor (col. 1, line

66), comprising:

"storing data groups in a database" and "word representing a characteristic of a

corresponding data group is attached to each of said data group, said data groups being obtained

by classifying numerical inputs from said sensor directly of after processing" (col. 2, lines 19-

43, 'the map database...includes features that affect speed of travel...', 'positions are...stored in

the map database...', 'driving instructions generated ...the two issues for spoken directions are

what to say and when to say it (data groups)', 'large taxonomy of inter-section types

(corresponding to database and including classifying)', 'chooses verbs (words) to indicate

(corresponding to attach) the kind (data group) of intersection', 'refer to landmarks and timing

...'; col. 11, line 42 to col. 12, line 31, 'position finding system determine position directly by

detecting an external signal' and 'position keeping system estimated the current position from

knowledge of an earlier position and the change in position', 'measure the amount of

turning...distances,...difference in rotation (numerical inputs)', 'position sensor...includes a

displacement sensor and a direction sensor' (classifying inputs));

"outputting" "word attached to the corresponding data group among the data groups

stored in said database if the corresponding data group is found to be similar to sensor input,

when the sensor input is received", (col. 2, lines 35-67, 'spoken direction', 'instruction', 'speech,

especially synthetic speech, as an output media', 'utterances be repeatable on demand',

'construct a new utterance with the same intent, but not necessarily the same words, as a

previous message', wherein the speech is necessarily associated with (attached to) the database

data groups, such as 'chooses verbs' or 'refer to landmarks'; col. 15, lines 61-64, 'instruction-

vp—generate a verb phrase' and 'instruction-np—generate a noun phrase' (read on word

attached to the corresponding data groups and are similar to sensor input respectively));

"temporarily storing input data from said sensor as data of a new data group after

classifying said input data when it is determined that said input data does not belong to any of

said groups classified in said database" and "attaching a word to said data of said new group

temporarily stored to store said data of new group in said database" (col. 20, lines 54-67, 'able to

model the uncertainty of a position', 'errors …occur if the database is somewhat out date',

'acquires a model of the user automatically…learn the driver's reaction time (necessarily storing

it as an input data) by measuring the time', which suggests that at least one input data is

classified as reaction time (in a new data group) and is temporarily stored for later use in

processing and/or outputting the related spoken instruction).

DAVIS does not explicitly teach that the processed and/or attached word is "a (the)

natural language word". However, it is noted that DAVIS discloses 'discourse generator (col. 3,

line 22) and 'description function to generate a description of the action…takes inputs specifying

the size of the description (brief or long), the tense (past, present or future), and the reference

position' (col. 15, lines 26-67), and providing the example sentences for the instructions (col. 16,

lines 9-14 and (col. 19, lines 48-50) that are obviously corresponded to natural language words,

which suggests that the DAVIS' system has capability of implementing functionality as claimed.

Therefore, one having ordinary skill in the art at the time the invention was made would have

found it obvious to provide discourse generator with specific instructions associating natural

language words, as taught by DAVIS himself, for the purpose of providing specific and/or

sufficient direction and increasing the driver's confidence for user using the system (DAVIS: col.

15, lines 40-50).

Further, it is noted that DAVIS does not explicitly teach that "a provisional code is

temporally attached to a data group stored in the database without a word until a word is

provide". However, the feature of providing temporary attached code that associated with

certain data group (category) for processing word is well known in the art as evidenced by

WACHTEL who, in the same field of endeavor, discloses 'control signal processing method and

apparatus having natural language interface capabilities' (title), comprising using 'search code

and codes (provisional code) depending upon (attached) the category (data group) of the current

word and storing, with each code, the value of a selected argument of the meaning of the current

word' and 'removing ...certain previously stored search codes (means that the codes are

temporally attached)' (col. 10, lines 27-44) (also see Table 2 and col. 11-12), which suggests that

the system has capability of implementing functionality as claimed. Therefore, it would have

been obvious to one of ordinary skill in the art at time the invention was made to modify DAVIS

by providing temporary attached code associating data group (category) for processing word(s),

as taught by WACHTEL, for the purpose (motivation) of offering convenient form for further

processing and/or enabling the operator to input switching instruction in natural language

(WACHTEL: abstract).

In addition, based on broadest reasonable interpretation of the claimed limitation in light

of the specification (page 17, lines 10-14), it is noted that DAVIS further discloses that his

invention is a 'computer apparatus' having '(computer) programs' and using 'database' (abstract

and col. 1, lines 6-67), which necessarily or inherently include providing default codes/values

(interpreted as provisional code) for certain variables in data structure of the programs or

fields/records of database tables before obtaining the corresponding input word, which suggests

that DAVIS' system alone may also satisfy the claimed limitation, in a manner of necessity

and/or inherence.

Moreover, it is noted that DAVIS in view of WACHTEL does not explicitly teach the

attached word "being input by a user". However, the feature is well known in the art as

evidenced by HON who, in the same field of endeavor, discloses 'method and apparatus for

automatically invoking a new word module for unrecognized user input' (title), comprising 'the

user interface' that 'suggests to a user which unrecognized words may be new words

(corresponding to new group)' and 'advises the user to enter (input) words into a new word

lexicon (corresponding to database)' (abstract and col. 8, lines 64-67). Therefore, it would have

been obvious to one of ordinary skill in the art at time the invention was made to modify DAVIS

in view WACHTEL by providing a mechanism for entering (inputting) the corresponding word

by user, as taught by HON, for the purpose (motivation) of improving the recognition accuracy

and/or improving the probability of spotting new words (HON: col. 2, lines 20-26).

As per **claim 2**, it recites a sensor data processing apparatus with means-plus functions.

The rejection is based on the same reason described for claim 1, because the rejection for claim 1

covers the same or similar limitations or equivalent functionalities as claim 2, wherein, the data

received/derived from 'the position sensor' (DAVIS: col. 11, line 42 to col. 12, line 67) corresponds to the claimed "state or state change", and 'instruction-vp—generate a verb phrase' and 'instruction-np—generate a noun phrase' (DAVIS: col. 15, lines 61-64) corresponds to the claimed "dynamic characteristic" and "static characteristic".

As per **claim 3** (depending on claim 2), DAVIS further teaches "status judging means for judging a status using a certain word attached to a group', (col. 14, line 24 to col. 16, lines 67, 'the acts in the working prototypes...(including judging a status)', 'short description', 'long description', 'verb phrases', 'specifying direction with landmark', 'a cue is expressed either as a full sentence ...or a proposed reposition phrase').

As per **claim 13**, it recites a computer-readable storage medium. The rejection is based on the same reason described for claim 1, because the rejection for claim 1 covers the same or similar limitations or equivalent functionalities as claim 13, wherein, the data received from 'the position sensor' is read on the claimed "unrelated to language".

As per **claim 15**, it recites a method. The rejection is based on the same reason described for claim 1, because the rejection for claim 1 covers the same or similar limitations or equivalent functionalities as claim 15.

Conclusion

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Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Qi Han whose telephone numbers is (571) 272-7604. The
examiner can normally be reached on Monday through Thursday from 9:00 a.m. to 7:30 p.m. If
attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,
Richemond Dorvil, can be reached on (571) 272-7602.

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